FORTY-SEVENTH ANNUAL REPORT

OF THE

# Maine Agricultural Experiment Station

ORONO, MAINE

1931

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UNIVERSITY OF MAINE

1931

# MAINE
# AGRICULTURAL EXPERIMENT STATION
# ORONO, MAINE

ORGANIZATION JANUARY TO JUNE, 1931

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And the Heads and Associates of Station Departments, and the Dean of the College of Agriculture

## THE STATION STAFF

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| **Administration** | [2]Warner J. Morse, Sc.D., Director |
| | [1]Fred Griffee, Ph.D., Assistant Director |
| | Charles C. Inman, Administrative Assistant |
| | Mary N. Cameron, Secretary |
| | Rose H. McGuigan, Clerk and Stenographer |
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| | Silas O. Hanson, Superintendent of Aroostook Farm |
| **Agricultural Economics** | Charles H. Merchant, Ph.D., Head of Department |
| | George F. Dow, M.S., Associate Economist |
| | William E. Schrumpf, M.S., Assistant Economist |
| | *Merton S. Parsons, M.S., Assistant Economist |
| | Elaine M. Pooler, Chief Assistant |
| | Magretta Blackmore, Assistant |
| | Dorrice E. Smith, Assistant |
| | Dorothy I. Bither, Assistant |
| **Biology** | Fred Griffee, Ph.D., Head of Department |
| | John W. Gowen, Ph.D., Collaborating Biologist, Animal Breeding |
| | W. Franklin Dove, Ph.D., Associate, Animal Breeding and Nutrition |
| | Joseph A. Chucka, Ph.D., Associate, Plant Breeding and Nutrition |
| | [3]Russell M. Bailey, B.S., Associate, Plant Breeding and Nutrition |
| | Iva M. Burgess, M.S., Assistant |
| | Mildred R. Covell, Assistant |
| | Frederick B. Chandler, B.S., Assistant, Blueberry Investigations |
| | Delmar B. Lovejoy, B.S., Assistant, Plant Breeding and Nutrition |
| | Elizabeth F. Murphy, B.A., Assistant, Animal Breeding and Nutrition |
| | Emmeline W. Kenney, Laboratory Assistant |
| | Madeleine F. Cotter, Laboratory Assistant |
| **Chemistry** | James M. Bartlett, Sc.D., Head of Department, Inspection Analyses |
| | Elmer R. Tobey, M.S., Ch.E., Research Chemist |
| | C. Harry White, Ph.C., Associate, Inspection Analyses |
| | Bernie E. Plummer, M.S., Assistant, Inspection Analyses |
| | [4]George P. Steinbauer, Ph.D., Seed Analyst |
| | †Willard B. Stone, Assistant Chemist |
| **Entomology** | Edith M. Patch, Ph.D., Head of Department |
| | Clarence R. Phipps, Ph.D., Associate |
| | John H. Hawkins, M.S., Assistant |
| | [5]Geddes W. Simpson, A.M., Assistant |
| | Alice W. Averill, Laboratory Assistant |
| **Home Economics** | Pearl S. Greene, M.A., Head of Department |
| | Marion D. Sweetman, Ph.D., Associate |
| | *†[6]Myrtle W. Dow, M.S., Assistant |
| **Plant Pathology** | Donald Folsom, Ph.D., Head of Department |
| | Reiner Bonde, M.S., Associate |
| | Florence L. Markin, M.S., Assistant |
| | Gladys E. Babbin, Laboratory Assistant and Seed Analyst |

[1]Assistant Director until April 17. Director from then on.
[2]Director until time of death, March 25.
[3]Beginning June 1.
[4]Beginning March 1.
[5]Beginning June 1.
[6]Through June 15.
*M.S. degree received in June.
†Temporary appointment.

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# AGRICULTURAL EXPERIMENT STATION
# ORONO, MAINE

## Organization July to December, 1931

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Emmeline W. Kenney, Laboratory Assistant
[3]Madeleine F. Cotter, Laboratory Assistant
Belle Dall, Clerk

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Reiner Bonde, M.S., Associate
Florence L. Markin, M.S., Assistant
Gladys E. Babbin, Laboratory Assistant and Seed Analyst

[1]Resigned September 30.
[2]Beginning October 1.
[3]Resigned September 30.
[4]Through August 31.
[5]Beginning November 1.
*Title changed from Associate to Entomologist October 9.
†Temporary appointment.

The publications of this Station will be sent free to any address in Maine. All requests should be sent to

Maine Agricultural Experiment Station,
Orono, Maine.

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## WARNER JACKSON MORSE*

During the late winter and early spring of 1931, within a few short weeks, two of the former directors of this Station passed from time temporal to time eternal. The younger man went first while still in office. The older, long retired from active service, full of years and honors, having paid tribute to his friend and successor by acting as honorary bearer at his funeral, himself soon trod the inevitable path. It is most fitting that in this volume should be set forth estimates of what manner of men they were, of what they did for Maine in the days of their strength.

Doctor Morse was New England born and reared and his entire life work was done in New England. His boyhood and early manhood were spent among the Green Mountains, his mature years among the Pine Trees, where, first as plant pathologist and later as director, during twenty-five years he bent his entire energies to the upbuilding of a prosperous agriculture in his adopted State.

His forbears for generations were of the soil. I spent some days long years ago in that Vermont farm home. The everlasting hills girt it round about. I love to think that their strength entered into the moral texture of the lad who was reared in their midst; for if the boy is father to the man, surely the quiet, self-contained, dependable, upright gentleman of later years was in part the product of his early environment.

From his hillside home our late friend passed to normal school and to college, graduating from the University of Vermont in 1898. Five years later he earned there the Master of Science degree and in 1912 at the University of Wisconsin that of Doctor of Philosophy, in both cases his work being done along botanical and plant pathological lines. In 1923 his Alma Mater conferred upon him the honorary degree of Doctor of Science.

Following graduation he taught natural sciences in Montpelier Seminary for two years, then for five years botany and bacteriology at the University of Vermont, serving also as assistant botanist of

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*Warner Jackson Morse was born in Waterbury Center, Vermont, October 30, 1872, and died in Orono, Maine, March 25, 1931. He served as Director of the Maine Agricultural Experiment Station from December 1, 1920, to the day of his death and had been Plant Pathologist during the fourteen years preceding his assumption of the directorate.

the Vermont Station. While there he was co-author of nine articles dealing with the maple sap flow, bacterial soft rots of vegetables and plant diseases in general but more especially potato diseases. From 1906, when he became plant pathologist at Maine, until, in 1921, he became director, he published more than forty papers, twenty-three of which dealt with potato and fourteen with apple diseases and their control, in all cases being sole or principal author. These publications set forth the results of painstaking research in a somewhat difficult field and they have stood the test of time. Not only have these products of laboratory and field trial withstood the scrutiny of fellow workers, but they proved applicable in actual farming operations. Doctor Morse could tell his story to potato growers and orchardists in their own language. They sensed his sincerity, respected his understanding of the subject-matter, realized the breadth of his practical experience, followed his suggestions, and they and the State profited.

When Doctor Morse became director, he succeeded a man of dynamic force. The two were as unlike as the proverbial oil and water but had long been colleagues and close friends, and each in his own way had well served the State. It was no easy task which was assumed, but its difficulties were surmounted. The ten years of his directorate were constructive years and the high standards of workmanship set by Doctor Jordan and continued by Doctor Woods were maintained by Doctor Morse.

The man was innately a conservative. He did not rush into print or chase chimeras. However, this does not imply that he was static in his outlook. Thoughtfully and thoroughly he viewed administrative problems as they came up and he acted accordingly. Under his sane guidance the Station's activities expanded and its influence grew both within and without State borders. As evidence of this far flung effect may be cited the fact that when the Chairman of the Executive Committee of the Association of Land Grant Colleges and Universities appeared before the House Committee on Agriculture in behalf of the then pending Purnell bill, he took—and not by chance—the Maine Station under Director Morse as an example of the nation wide rather than of the State wide influence which American Stations exert.

Industry, honesty, conscientiousness, steadfastness, fair dealing, openmindness—these traits and more characterized the man

and the official, just such traits as long have characterized the sturdy stock from which he sprang and of which he was a fine example. May New England never lack such men!

Joseph Lawrence Hills